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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/723,512	11/28/2000	Katsuki Minamino	450100-02864	4886

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EXAMINER

JACKSON, JAKIEDA R

ART UNIT	PAPER NUMBER
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2655

DATE MAILED: 11/14/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/723,512	Applicant(s) MINAMINO, KATSUKI	
	Examiner Jakieda R Jackson	Art Unit 2655	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☐ Claim(s) 1-11 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 28 November 2000 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Specification

1. The title of the invention is not descriptive. It is too broad. A new title is required that is clearly indicative of the invention to which the claims are directed.
2. The specification is objected to because of the following informalities:
 - The words "voice recognition" should be replaced for the intended --speech--.Appropriate correction is required.

Claim Objections

3. **Claims 1-11** are objected to because of the following informalities:
 - The words "voice recognition" should be replaced for the intended --speech--.Appropriate correction is required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

4. **Claims 1-3 and 9-10** are rejected under 35 U.S.C. 102(e) as being anticipated by Sadakuni (U.S. Patent No. 6,446,056).

Regarding **claim 1**, Sadakuni discloses an interactive artificial intelligence device disposed in a robot (column 1, lines 48-50) comprising:

voice recognition means for recognizing a voice (speech recognition unit, figure 2, element 2; column 5, lines 56-61); and

control means for controlling said speech recognition means in accordance with the state of the robot (control system; column 3, lines 46-49).

Regarding **claim 2**, Sadakuni's interactive artificial intelligence device control means control said speech recognition means in accordance with the state of the robot

in terms of the growth, emotion (emotion-generating unit, figure 1 element 3; translation column 4, lines 29-46) or instinct.

Regarding **claim 3** Sadakuni's interactive artificial intelligence device discloses control means that changes the recognition accuracy of said speech recognition means in accordance with the state of said robot (column 9, lines 2-7).

Regarding **claim 9**, Sadakuni's interactive artificial intelligence device performs a predetermined action in accordance with the speech recognition result output by said voice recognition means (column 2, lines 44-50).

Regarding **claim 10**, the method is inherent in the device and is interpreted and rejected for the same reasons as set forth in **claim 1**, as taught by Sadakuni (column 3, lines 1-2).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. **Claims 4-8** are rejected under 35 U.S.C. 103(a) as being unpatentable over Sadakuni in view of Gupta et al. (U.S. Patent No. 6,243,680), hereinafter referenced as Gupta.

Regarding **claims 4, 5, 8 and 11** Sadakuni discloses an interactive artificial intelligence device but lacks that the speech recognition means includes dictionary storage means and that control means control the maximum numbers of words to be described in the dictionary and that the control means controls said speech recognition means such that the words described in the respective dictionaries are weighted in accordance with the state of said robot. Gupta discloses said speech recognition means includes dictionary storage means for storing a dictionary in which words to be recognized in speech recognition are described (speech recognition dictionary, abstract),

said speech recognition means includes dictionary storage means (non-volatile storage medium) for storing a plurality of dictionaries in which words to be recognized in speech recognition are described such that the words to be recognized are divided into

groups (stored separately) and the respective groups of words are stored in different dictionaries (column 11, lines 25-31),

said control means controls the maximum number of words allowed to be described in said dictionary, in accordance with the state of said robot (column 1, lines 54-62); and

said control means controls said speech recognition means such that the words described in the respective dictionaries are weighted in accordance with the state of said robot and speech recognition is performed using the weighted words (column 10, lines 46-56).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Sadakuni's interactive artificial intelligence device such that it includes dictionary storage means and that control means control the maximum numbers of words to be described in the dictionary and that the control means controls said speech recognition means such that the words described in the respective dictionaries are weighted in accordance with the state of said robot to allow an increase in the recognition accuracy for words in a particular area.

Regarding **claim 6**, Sadakuni discloses an interactive artificial intelligence device but lacks that the speech recognition means includes a dictionary and that the control means controls another word linked to a word such that is included in the dictionary. Gupta discloses that said voice recognition means includes dictionary storage means for storing a dictionary in which words to be recognized in voice recognition are

described such that other words are linked (combination of words) to said words to be recognized (abstract); and

said control means controls said voice recognition means such that another word linked to a word, which is included in the dictionary and which is obtained as a speech recognition result, is output as a final speech recognition word depending upon the state of the robot (column 10, lines 29-33 and lines 46-56). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Sadakuni's interactive artificial intelligence device such that it includes a dictionary and that the control means controls another word linked to a word such that it is included in the dictionary to allow the information identifying the desired action to be performed (column 10, lines 39-42).

Regarding **claim 7**, Sadakuni discloses an interactive artificial intelligence device but lacks that the words are linked to other acoustically or semantically similar words. Gupta discloses that the words to be recognized in voice recognition are described in said dictionary such that said words are linked to other acoustically (acoustic information) or semantically similar words (column 3, lines 57-67; column 9, lines 57-60). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Sadakuni's interactive artificial intelligence device such that it has words that are linked to other acoustically or semantically similar words to indicate each syllable in the language of speech which is subjected to the speech recognition and to connect several word models and use the connected word models to recognize speech since words are pronounced differently.

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Regarding **claim 11**, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use a storage medium to store data such as computer executable code for controlling emotions, voice recognition etc.

Double Patenting

6. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

7. **Claims 1-2 and 10-11** are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over **claims 1-2, 7 and 10-11** of copending Application No. 09/723,813. Although the conflicting claims are not identical, they are not patentably distinct from each other because

Regarding **claim 1**, 09/723,813 discloses a voice processing device (voice recognition apparatus) built (disposed) into a robot, said voice processing device comprising:

voice processing means (voice recognition means) for processing (recognizing) voice; and

control means for controlling voice processing (recognition) means, based on the state of said robot (claim 1 and 7). It would have been obvious to one of ordinary skill in the

art to change voice processing to voice recognition because it would require only routine experimentation in the art.

Regarding **claim 2**, 09/723,813 discloses a voice processing device (voice recognition apparatus) wherein control means control said voice process (voice recognition) means in accordance with the state of the robot in terms of the emotion or instinct (claim 2 and 7). Therefore, **claim 2** is interpreted and rejected for the same reasons as set forth in **claim 1**.

Regarding **claim 10**, 09/723,813 discloses a voice processing method (voice recognition method) built (disposed) into a robot, said method comprising:

a voice processing step for processing voice (recognizing a voice); and
a control step for controlling voice processing in said voice processing step, based on the state of said robot (controlling said voice recognition step in accordance with the state of said robot (claim 10). Therefore, **claim 10** is interpreted and rejected for the same reasons as set forth in **claim 1**.

Regarding **claim 11**, 09/723,813 discloses a recording (storage) medium on which a program to be executed by a computer, for causing (to make) a robot perform voice processing (voice recognition) said program comprising of:

a voice processing step for processing voice (recognizing a voice); and
a control step for controlling voice processing in said voice processing step, based on the state of said robot (controlling said voice recognition step in accordance with the state of said robot (claim 11). It would have been obvious to one of ordinary skill in the

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art that a storage medium is a device for in which information can be recorded and stored for later retrieval and use.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Conclusion

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

U.S. Patent No. 5,860,064 to Henton discloses a method and apparatus for automatic generation of vocal emotion in a synthetic text-to-speech system

U.S. Patent No. 5,802,488 to Edatsune discloses an interactive speech recognition with varying responses for time of day and environmental conditions.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jakieda R Jackson whose telephone number is 703.305.5593. The examiner can normally be reached on Monday through Friday from 7:30 a.m. to 5:00p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Talivaldis I. Smits can be reached on 703. 306-3011. The fax phone numbers for the organization where this application or proceeding is assigned are 703.872.9314 for regular communications and 703.872.9314 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703.305.4700.

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JRJ
October 31, 2003


RICHEMOND DORVIL
SUPERVISORY PATENT EXAMINER